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(54) Title: HORMONE RESPONSE ELEMENT BINDING TRANSREGULATORS

(57) Abstract: Disclosed are compositions and methods for ERE-binding transregulators that specifically and potently regulate ERE-containing genes. To accomplish this, we took advantage of the modular nature of ER and initially designed a monomeric ERE binding module by co-joining two DNA binding domains with the hinge domain. Integration of strong activation or repressor domains from other transcription factors into this module generated constitutively active ERE-binding activators (EBAs) and ERE-binding repressors (EBRs) respectively. These novel transregulators are the basis for the targeted regulation of ERE containing genes, the identification of estrogen responsive gene networks, and the development of alternative/complementary therapeutic approaches for estrogen target tissue cancers.

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